

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-12 (Cancelled)

61
Claim 13 (Previously Presented) An arachidonic acid-containing oil comprising a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio, and an arachidonic acid content of 30 to 50%, wherein said oil is produced by culturing a producer microorganism in a fermentor with aeration.

Claim 14 (Previously Presented) An arachidonic acid-containing oil comprising a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower, a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio, and an arachidonic acid content of 30 to 50%, wherein said oil is produced by culturing a producer microorganism in a fermentor with aeration.

Claims 15-29 (Cancelled)

enter
S.W.
Claim 30 (Currently Amended) An immature infant formula, infant formula, baby food or pregnancy food product comprising a nutritive dietary supplement according to claim 29 13.

Claim 31 (Cancelled)

E1
Cont

Claim 32 (Previously Presented) An arachidonic acid-containing oil comprising a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower, and an arachidonic acid content of 30 to 50%, wherein said oil is produced by culturing a producer microorganism in a fermentor with aeration.

Claim 33 (Previously Presented) An arachidonic acid-containing oil according to claim 32, characterized by being a natural oil.

Claim 34 (Previously Presented) An arachidonic acid-containing oil according to claim 32, characterized by being a microbial oil.

Claim 35 (Previously Presented) An arachidonic acid-containing oil according to claim 32, characterized by being a microbial oil obtained from a microorganism belonging to the genus *Mortierella* subgenus *Mortierella*.

Claim 36 (Previously Presented) An arachidonic acid-containing oil according to claim 32, characterized by being an oil obtained by using an arachidonic acid synthetic system of a microorganism belonging to the genus *Mortierella* subgenus *Mortierella*.

Claims 37-46 (Cancelled)

Claim 47 (Previously Presented) A nutritive dietary supplement comprising at least one arachidonic acid-containing oil selected from the group consisting of:

an arachidonic acid-containing oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower and an arachidonic acid content of 30 to 50%;

an arachidonic acid-containing oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio and an arachidonic acid content of 30 to 50%; and

an arachidonic acid-containing oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower, a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio, and an arachidonic acid content of 30 to 50%,

wherein said oil is produced by culturing a producer microorganism in a fermentor with aeration.

Claim 48 (Previously Presented) The arachidonic acid-containing oil as recited in claim 13, wherein said producer microorganism is cultured in a fermentor with aeration in a medium containing soybean protein as a nitrogen source.

Claim 49 (Previously Presented) The arachidonic acid-containing oil as recited in claim 14, wherein said producer microorganism is cultured in a fermentor with aeration in a medium containing soybean protein as a nitrogen source.

Claim 50 (Previously Presented) The arachidonic acid-containing oil as recited in claim 32, wherein said producer microorganism is cultured in a fermentor with aeration in a medium containing soybean protein as a nitrogen source.

Claim 51 (Currently Amended) The nutritive dietary supplement as recited in claim ~~37~~ 47, wherein said producer microorganism is cultured in a fermentor with aeration in a medium containing soybean protein as a nitrogen source.

61
64
Cont

81
Cont

Claim 52 (Previously Presented) An arachidonic acid-containing oil produced by a process of culturing with aeration a microorganism belonging to the genus *Mortierella* subgenus *Mortierella* in a liquid medium containing a nitrogen source derived from soybean in a fermentor under conditions effective to produce an oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio, and an arachidonic acid content of 30 to 50%.

Claim 53 (Previously Presented) An arachidonic acid-containing oil produced by a process of culturing with aeration a microorganism belonging to the genus *Mortierella* subgenus *Mortierella* in a liquid medium containing a nitrogen source derived from soybean in a fermentor under conditions effective to produce an oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower, a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 1.2 or less with respect to the desmosterol compositional ratio, and an arachidonic acid content of 30 to 50%.

Claim 54 (Previously Presented) An arachidonic acid-containing oil produced by a process of culturing with aeration a microorganism belonging to the genus *Mortierella* subgenus *Mortierella* in a liquid medium containing a nitrogen source derived from soybean in a fermentor under conditions effective to produce an oil having a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 35% or lower, and an arachidonic acid content of 30 to 50%.

Claim 55 (Currently Amended) The arachidonic acid-containing oil as recited in claim ~~42~~ 52, wherein said nitrogen source has a nitrogen content of at least 2 wt% with respect to the total components except for water.

Claim 56 (Currently Amended) The arachidonic acid-containing oil as recited in claim ~~43~~ 53, wherein said nitrogen source has a nitrogen content of at least 2 wt% with respect to the total components except for water.

Claim 57 (Currently Amended) The arachidonic acid-containing oil as recited in claim ~~44~~ 54, wherein said nitrogen source has a nitrogen content of at least 2 wt% with respect to the total components except for water.

Claim 58 (Currently Amended) A nutritive dietary supplement comprising the arachidonic acid-containing oil as recited in claim ~~42~~ 52.

Claim 59 (Currently Amended) A nutritive dietary supplement comprising the arachidonic acid-containing oil as recited in claim ~~43~~ 53.

Claim 60 (Currently Amended) A nutritive dietary supplement comprising the arachidonic acid-containing oil as recited in claim ~~44~~ 54.

Claim 61 (New) The arachidonic acid-containing oil of claim 13, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.9 or less with respect to the desmosterol compositional ratio.

Claim 62 (New) The arachidonic acid-containing oil of claim 14, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 33% or lower, and

61
Contd

Do not enter
Ser

Do not enter
Sum
8/18/03
has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.9 or less with respect to the desmosterol compositional ratio.

Claim 63 (New) The arachidonic acid-containing oil of claim 61, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.6 or less with respect to the desmosterol compositional ratio.

Claim 64 (New) The arachidonic acid-containing oil of claim 62, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 30% or lower, and

has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.6 or less with respect to the desmosterol compositional ratio.

Claim 65 (New) The arachidonic acid-containing oil of claim 52, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.9 or less with respect to the desmosterol compositional ratio.

Claim 66 (New) The arachidonic acid-containing oil of claim 53, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 33% or lower, and

has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.9 or less with respect to the desmosterol compositional ratio.

Claim 67 (New) The arachidonic acid-containing oil of claim 65, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.6 or less with respect to the desmosterol compositional ratio.

Claim 68 (New) The arachidonic acid-containing oil of claim 66, wherein said oil has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio of 30% or lower, and

has a 24,25-methylenecholest-5-en-3 β -ol compositional ratio in a proportion of 0.6 or less with respect to the desmosterol compositional ratio.